

LISTING OF CLAIMS:

Claims 1 – 5 (Canceled).

6. (Currently amended) An apparatus for driving an occupant-protecting airbag device mounted on a vehicle, the airbag device including an airbag and a squib to which power is supplied, ~~[[and]]~~ the squib being deployed by igniting the squib, the apparatus comprising:

a plurality of sensors each sensing a physical quantity acting on the vehicle and ~~outputting to output~~ ~~[[an]]~~ analog signal indicative of the physical quantity;

a comparator placed to directly receive at least one of the analog signals, the comparator configured to make ~~making~~ a comparison between the at least one of the analog signals ~~outputted from the plurality of sensors~~ and a reference signal so that given to the comparator to produce a digital signal corresponding to the at least one of the analog signals ~~signal is produced~~;

a digital-signal input port configured to receive the digital signal produced by the comparator;

an A/D (analog to digital) converter receiving the analog signal outputted from at least one of the plurality of sensors to cause the A/D converter to perform an A/D conversion on the analog signal to produce another digital signal;

a determination unit configured to use both ~~[[of]]~~ the another digital signal ~~[[converted]]~~ produced by the A/D converter and the digital signal received by the digital-signal input port to determine whether or not the airbag should be deployed; and

an ignition circuit configured to cause the squib to be ignited ~~ignite~~ to deploy the airbag when the determination unit determines that the airbag should be deployed.

7. (Currently Amended) The apparatus according to claim 6, wherein the digital signal produced by the comparator is an ON/OFF signal ~~consisting~~ comprising ~~[[of]]~~ high level signals and low level signals.

8. (Currently Amended) The apparatus according to claim 6, wherein the comparator is placed to receive ~~[[the]]~~ one or more analog signals outputted from a part of the plurality of sensors and the A/D converter is placed to receive ~~[[the]]~~ one or more analog signal signals outputted from a remaining of the plurality of sensors.

9. (New) The apparatus according to claim 6, wherein the plurality of sensors sense acceleration as the physical quantity.

10. (New) The apparatus according to claim 9, wherein the plurality of sensors are two in number and the comparator is a single comparator placed to directly receive one of the analog signals outputted from the two sensors.

11. (New) The apparatus according to claim 10, wherein the digital-signal input port, the A/D converter and the determination unit are incorporated in a microcomputer, wherein the microcomputer is coupled to the ignition circuit by two mutually separated transmission lines, wherein each of the two mutually separated transmission lines transmits a signal to ignite the squib from the determination unit.

12. (New) The apparatus according to claim 11, wherein the squib is one in number, wherein the ignition circuit includes two igniting devices, wherein each of the two igniting

devices receives the signal to ignite the squib from the determination unit through each of the two mutually separated transmission lines, wherein each of the two igniting devices ignites the squib in response to the received signal.

13. (New) The apparatus according to claim 12, wherein the determination unit includes two determination components, wherein each of the two determination components performs the determination, wherein each of the two determination components is configured to provide the signal to ignite the squib to each of the igniting devices through each of the two mutually separated transmission lines.

14. (New) The apparatus according to claim 13, wherein a first determination component of the two determination components responds to the another digital signal produced by the A/D converter and a second determination component of the two determination components responds to the digital signal outputted by the comparator, wherein the signals to ignite the squib from both the first and second determination components are provided to the two igniting devices in parallel with each other.

15. (New) The apparatus according to claim 6, wherein the plurality of sensors are two in number and the comparator is a single comparator placed to directly receive one of the analog signals outputted from the two sensors.

16. (New) The apparatus according to claim 15, wherein the determination unit is coupled to the ignition circuit through two mutually separated transmission lines to transmit signals to ignite the squib.

17. (New) The apparatus according to claim 16, wherein the squib is one in number, wherein the ignition circuit includes two igniting devices that receive the signals to ignite the squib respectively from the determination unit through the two mutually separated transmission lines, wherein each of the two igniting devices ignites the squib in response to the received signal to ignite the squib.

18. (New) The apparatus according to claim 17, wherein the determination unit includes two determination components that each performs the determination, wherein each of the two determination components is configured to provide the signal to ignite the squib to each of the igniting devices through each of the two mutually separated transmission lines.

19. (New) The apparatus according to claim 18, wherein a first determination component of the two determination components responds to the another digital signal produced by the A/D converter and a second determination component of the two determination components responds to the digital signal produced by the comparator, wherein the signals to ignite the squib from both the first and second determination components are provided to both the igniting devices in parallel with each other.

20. (New) An apparatus for driving an occupant-protecting airbag device mounted on a vehicle, the airbag device including an airbag and a squib to which power is supplied and the squib being deployed by igniting the squib, the apparatus comprising:

a plurality of sensors each sensing a physical quantity acting on the vehicle and outputting an analog signal indicative of the physical quantity;

a comparator placed to directly receive at least one of the analog signals and configured to make a comparison between the at least one of the analog signals and a reference signal given to the comparator so that a digital signal corresponding to the at least one analog signal is produced;

a digital-signal input port configured to receive the digital signal produced by the comparator;

an A/D (analog to digital) converter receiving the analog signal outputted from at least one of the plurality of sensors to cause the A/D converter to perform an A/D conversion on the signal to produce another digital signal;

determining means for using the another digital signal produced by the A/D converter and the digital signal received by the digital-signal input port to determine whether or not the airbag should be deployed; and

igniting means for causing the squib to be ignited to deploy the airbag when the determination unit determines that the airbag should be deployed.

21. (New) An apparatus for driving an occupant-protecting airbag device mounted on a vehicle, the airbag device including an airbag and a squib to which power is supplied, the squib being deployed by igniting the squib, the apparatus comprising:

a first sensor and a second sensor for sensing a physical quantity acting on the vehicle, the first sensor and the second sensor respectively outputting first and second analog signals indicative of the physical quantity;

an analog to digital (A/D) converter configured to receive the first analog signal outputted from first sensor and produce a first digital signal corresponding to the first analog signal;

a comparator disposed to directly receive the second analog signal outputted by the second sensor, the comparator configured to make a comparison between the second analog signal and a reference signal and produce a second digital signal corresponding to the second analog signal;

a digital-signal input port configured to receive the second digital signal produced by the comparator;

a determination unit configured to determine whether or not the airbag should be deployed based upon both the first digital signal and the second digital signal; and

an ignition circuit configured to cause the squib to be ignited to deploy the airbag when the determination unit determines that the airbag should be deployed.

22. (New) The apparatus according to claim 21, wherein the second digital signal produced by the comparator is an ON/OFF signal comprising high level signals and low level signals.

23. (New) The apparatus according to claim 21, wherein the digital-signal input port, the A/D converter and the determination unit are incorporated in a microcomputer, wherein the microcomputer is coupled to the ignition circuit by two mutually separated transmission lines, wherein each of the two mutually separated transmission lines transmits a signal to ignite the squib from the determination unit.

24. (New) The apparatus according to claim 21, wherein the determination unit includes two determination components, wherein each of the two determination components performs the determination, wherein the two determination components are respectively coupled to the

ignition circuit by two mutually separated transmission lines, wherein each of the two determination components is configured to provide a signal to ignite to the ignition circuit through each of the two mutually separated transmission lines.

25. (New) The apparatus according to claim 24, wherein a first determination component of the two determination components responds to the first digital signal produced by the A/D converter and a second determination component of the two determination components responds to the second digital signal produced by the comparator, wherein the signals to ignite from both the first and second determination components are provided to the ignition circuit in parallel.